# AUTOMATED RESOURCES MANAGEMENT SYSTEM (ARMS™) FOR IMPROVED ENVIRONMENTAL BASELINE SURVEYS AND SUSTAINABILITY PRACTICES

**US Army Corps of Engineers ®**

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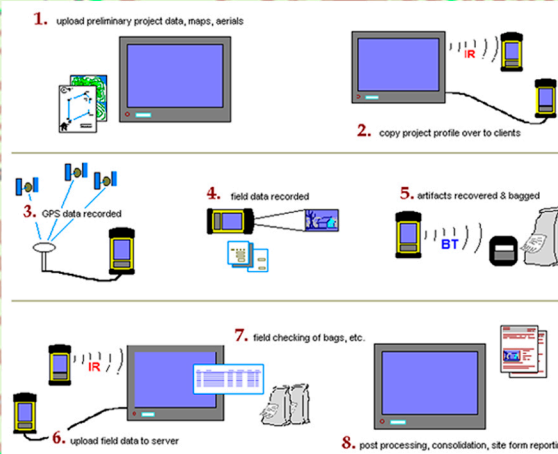Jerry Lilly
Coonewah Consulting, Inc.

ABSTRACT: ARMS™ technology enables an innovative business process that significantly improves data collection, reliability and integration capabilities as well as facilitates stewardship, compliance, sustainability and readiness requirements. It provides an innovative, cost effective and time efficient, programmatic approach to understanding and solving environmental management issues.

ERDC-CERL has developed a powerful tool consisting of a real-time, integrated client/server, field computer application designed to capture, process and share environmental baseline survey data—an Automated Resource Management System (ARMS™). The ARMS™ approach is an innovative business process designed to improve environmental reporting and sustainability during deployed operations. It demonstrates the efficacy of using this technology for making informed, coordinated decisions regarding the development and integration of environmental considerations across Doctrine, Organizations, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF) and military operations, respectively.

The ARMS™ contains a series of pre-loaded digital forms that are organized in a logical, progressive manner, which can be customized and used for all types of routine and complex, environmental baseline surveys.

Customized Forms:
- Drive logic Flow
- Control required fields
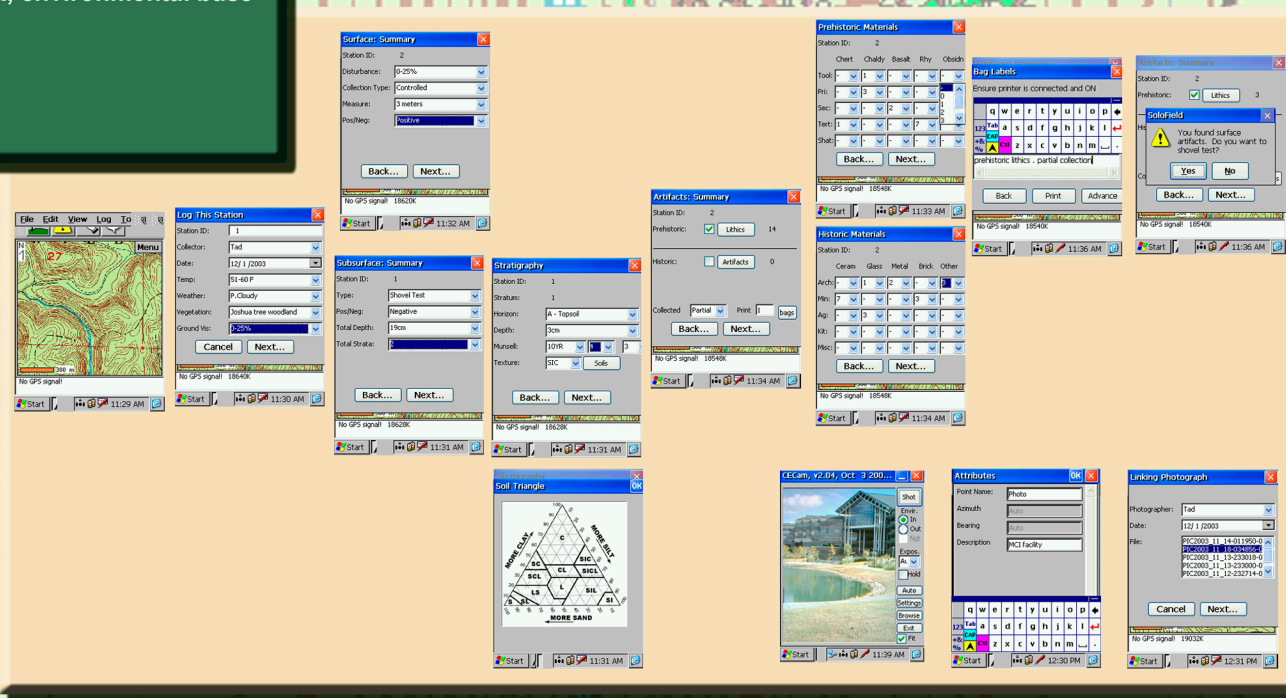- Minimize user error

**Consolidated Reporting:**
- GPS data already corrected via WAAS
- Integrates GIS data from multiple client handhelds
- Supports export to SHP and ASCII formats

The Automated Resource Management System (ARMS™) automates collection, integration, analysis, reporting and archiving of data in a variety of applications while insuring data accuracy and reliability not attainable conventionally. Applications include:

- Environmental
- Safety
- Security
- Military
- Educational
- Emergency Management
- Land Use
- Fish and Wildlife Management
- Construction and Maintenance of Highways and Waterways
- Mining
- Exploration
- Manufacturing
- Recreational Management
- Urban Restoration, and
- Archaeological Inventory and Evaluation

ARMS™ is a powerful, hand-held, ruggedized computer, which integrates a GIS data recordation program with high-resolution digital instrumentation.

- Digital camera (video and audio capabilities)
- Differential global positioning system
- Compass
- Clock
- Bar code labeler for tracking field specimens
- Additional peripherals are being considered for the next prototype:
  - Laser range finder
  - Inclinometer
  - Altimeter
  - Thermometer
  - Barometer

**For more information, please contact:**

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ARMS™ Patent Pending 729,269 (COE-564)